

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Please amend the claims as follows:

Claims 1-54 (cancelled)

55. (Currently Amended) A polyethylene composition comprising a low-molecular-weight (LMW) ethylene homopolymer component and a high-molecular-weight (HMW) ethylene interpolymer component, and wherein the LMW component ~~has is~~ characterized as having a molecular weight distribution, MWD^L , of less than about 8, wherein the same catalyst system is used to make the LMW component and the HMW component and wherein the HMW component has a molecular weight distribution, MWD^H , less than about 5 and has a substantially uniform comonomer distribution, or wherein the HMW component has a reverse comonomer distribution.

56. (Previously Presented) The polyethylene composition of claim 55, wherein the polyethylene composition is characterized as having a bimodal molecular weight distribution, and a ductile-brittle transition temperature, T_{db} , of less than -20°C .

57. (Previously Presented) The polyethylene composition of claim 55, wherein the LMW component has a density of greater than 0.940 g/cm^3 .

58. (Currently Amended) The polyethylene composition of claim 55, wherein the LMW component has an I_2 value, ranging from about 30 to about 1000 g/10 minutes, as determined in accordance with ASTM D-1238 (Condition 2.16 kg/190°C).

59. (Previously Presented) The polyethylene composition of claim 55, wherein the HMW component has a density ranging from about 0.905 to about 0.955 g/cm^3 .

60. (Currently Amended) The polyethylene composition of claim 55, wherein the HMW component has an $I_{21.6}$ value, ranging from about 0.1 to about 15, as determined in accordance with ASTM D-1238 (Condition 21.6kg/190°C).

61. (Currently Amended) The composition of claim 55, wherein the HMW is characterized by a unimodal molecular weight distribution, MWD^H of about 4.5 or less.

62. (Currently Amended) The composition of claim 61, wherein M_w^H/M_w^L is about 1.3 or higher, and wherein M_w^H is the weight average molecular weight of the high molecular weight component, and M_w^L is the weight average molecular weight of the low molecular weight component.[[.]]

63. (Previously Presented) The composition of claim 55, wherein MWD^L ranges from about 2 to about 5.

64. (Currently Amended) The composition of claim 61, wherein MWD^H ranges from about 1.5 to about 4 ~~about 2 to about 5~~.

65. (Currently Amended) The polyethylene composition of claim 56 ~~claim 55~~, wherein the polyethylene composition is characterized by ~~as~~ a molecular weight distribution (MWD), as defined by the ratio of M_w/M_n of about 30 or less[[.]] ~~and the HMW component is characterized as having a substantially uniform comonomer distribution or a reverse comonomer distribution.~~

66. (Currently Amended) The composition of claim 65, wherein the HMW component has a reverse comonomer distribution, characterized as the molar comonomer content of interpolymer fractions, having a M_w greater than, or equal to,

300,000 g/mole, being at least 25 percent higher, than the molar comonomer content of interpolymer fractions, having a M_w of less than, or equal to, 100,000 g/mole.

67. (Currently Amended) The composition of claim 55, wherein the T_{db} ranges from -25°C to about -50°C .

68. (Currently Amended) The composition of claim 55, wherein the composition is characterized as having an $I_{21.6}/I_5$ ratio of less than, or equal to, about 30, as determined in accordance with ASTM D-1238 (Condition 21.6 kg/190°C and Condition 5 kg/190°C).

69. (Currently Amended) The composition of claim 55, wherein the composition is characterized as having an $I_{21.6}$ ranging from about 3 g/10 min to less than about 50 g/10 min ~~50 g/10 min~~, as determined in accordance with ASTM D-1238 (Condition 21.6 kg/190°C).

70. (Currently Amended) The composition of claim 55, wherein the composition is characterized as having an I_5 ranging from about 0.05 g/10 min ~~0.05~~ to about 2 g/10 min ~~2 g/10 min~~, as determined in accordance with ASTM D-1238 (Condition 5 kg/190°C).

71. (Currently Amended) The composition of claim 55, wherein the composition is characterized as having a M_{v1}/M_{v2} ratio of less than, or equal to, 0.6, where M_{v1} is the viscosity average molecular weight of the LMW high density component, and M_{v2} is the viscosity average molecular weight of the HMW interpolymer component, as determined using ATREF-DV analysis.

72. (Previously Presented) The composition of claim 55, wherein the composition is manufactured using a catalyst system comprising a metallocene catalyst system and/or a Ziegler-Natta catalyst system.

73. (Previously Presented) The composition of claim 72, wherein the metallocene catalyst system comprises a constrained geometry catalyst.

74. (Currently Amended) The composition of claim 72, wherein the catalyst system comprises an activator₁ which has been bonded or fixed to a support₁ prior to the addition of the metallocene catalyst.

75. (Previously Presented) The composition of claim 74, wherein the activator is a boron-containing compound or an alumoxane.

76. (Previously Presented) The composition of claim 66, wherein the reverse comonomer distribution is characterized by a comonomer distribution gradient in the range from about 0.0001 to about 0.1.

77. (Previously Presented) The composition of claim 66, wherein the reverse comonomer distribution is characterized by a comonomer distribution gradient in the range from about 0.001 to about 0.02.

78. (Previously Presented) The composition of claim 55, wherein the M_w/M_n of the composition is between about 5 and about 20.

79. (Previously Presented) An article of manufacture made from the composition claim 55.

80. (Previously Presented) The article of claim 79, wherein the article is a gas pipe or a water pipe.

81. (Canceled)

82. (Canceled)

83. (New) A polyethylene composition comprising a low-molecular-weight (LMW) ethylene homopolymer component, and a high-molecular-weight (HMW) ethylene interpolymers component, and wherein the LMW component has a molecular weight distribution, MWD^L , of less than about 8, and wherein the same catalyst system is used to make the LMW component and the HMW component, and wherein the composition has a molecular weight distribution less than 17.5.

84. (New) A polyethylene composition comprising a low-molecular-weight (LMW) ethylene homopolymer component, and a high-molecular-weight (HMW) ethylene interpolymers component, and wherein the LMW component is characterized as having a molecular weight distribution, MWD^L , of less than about 8, and
wherein the LMW component is prepared from a constrained geometry catalyst.